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Book of Abstracts
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Kellie Ann Beall, Editor

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U.S. Department of Commerce
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Effects of Freeboard and Lip Thickness on the Properties of Flames Burning in Open Metal Containers

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ABSTRACT

We report here the effects of freeboard and wall thickness on the properties of n-heptane and diesel fuel flames burning in open metal containers. Lip temperatures, flame temperatures and heat release rates were measured for flames of n-heptane and diesel fuel in both round and square metal containers ranging in size from 0.05 to 5.00 ft^2 of fuel surface area and for wall thicknesses ranging from 0.03 to 0.25 inches. The effects of varying freeboard on the measured quantities was also examined. Concentration requirements for the extinguishment of n-heptane and diesel fuel flames with halocarbon and inert gas type agents was also examined under varying conditions of freeboard and container wall thickness.